

### **REMARKS/ARGUMENTS**

This Amendment is being filed in response to the Final Office Action of February 3, 2010 and the Advisory Action of May 11, 2010. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 18-24 and 26-32 are pending in the Application. Claim 18 is an independent claim.

In the Final Office Action, claims 18-22, 24, 29 and 31 are rejected under 35 U.S.C. §102(b) over U.S. Patent No. 6,337,215 to Wilson ("Wilson"). Claims 18-24 and 31 are rejected under 35 U.S.C. § 102(b) over 13 Biosensors and Bioelectronics, pp. 731-739 (1998) by Baselt, ("Baselt"). Claims 26 and 28 are rejected under 35 U.S.C. § 103(a) over Wilson or Baselt in view U.S. Patent No. 6,060,246 to Summerton ("Summerton"). Claims 27, 30 and 32 are rejected under 35 U.S.C. § 103(a) over Wilson or Baselt in view of U.S. Patent No. 6,984,491 to Mirkin ("Mirkin"). These rejections are respectfully traversed. It is respectfully submitted that claims 18-24 and 26-32 are allowable over Wilson and Baselt alone and in view of any combination of Summerton and Mirkin for at least the following reasons.

Claim 18 is amended to clarify its recitation. In particular, claim 18 recites "a force generating the mechanical stress sufficient to break the bindings between the first target and capture microbiological entities is used to distinguish between the different strengths of the bindings." This force is discussed in the present application, for example, at page 8,

line 25 to page 9, line 10 of the specification. The object of the present apparatus, as recited for example in claim 18, is to "test" the binding of the first particle (e.g., see, present application, item 1, FIGs. 1-4) to the bio molecule (e.g., see, present application, items T and C, FIGs. 1-4) by applying a force by the second particle (e.g., see, present application, item 2, FIGs. 1-4), whereby if the binding is non specific, then the bond will break and if the bond is due to specific interactions between the microbiological molecule and the first particle, then the particles will remain bound.

Contrarily, and as recognized by the Final Office Action (see, Final Office Action, page 3), Wilson causes beads with different magnetic moments to move at different rates yet does not teach, disclose or suggest generation of the mechanical stress sufficient to break the bindings between the particles.

Baselt utilizes particles bound to a magnetic microbeads which are selectively bound to a substrate. In Baselt, a magnetic field is applied to remove the magnetic microbeads from the substrate and the number of remaining microbeads is identified to characterize biomolecular interactions (see, Baselt, abstract and page 3, under heading "THE BEAD ARRAY COUNTER CONCEPT").

It is respectfully submitted that the apparatus of claim 18 is not anticipated or made obvious by the teachings of Wilson and Baselt. For example, Wilson and Baselt do not teach, disclose or suggest, an apparatus for distinguishing strengths of bindings between first target and capture microbiological entities that amongst other patentable elements, comprises (illustrative emphasis added) "first and second particles, at least one of which is

magnetic, the first particles being connected only to the first target microbiological entities; and means for acting on the first and second particles to cause the first and second particles to exert a mechanical stress on the bindings between the first target and capture microbiological entities, a force generating the mechanical stress sufficient to break the bindings between the first target and capture microbiological entities is used to distinguish between the different strengths of the bindings, wherein the force used by the means for acting to generate stress on the first and second particles is provided at least by a magnetic field generator" as recited in claim 18. Summerton and Mirkin are introduced for allegedly showing elements of the dependent claims and as such, do nothing to cure the deficiencies in Wilson and Baselt.

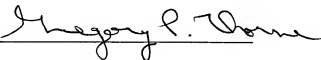
Based on the foregoing, the Applicant respectfully submits that independent claim 18 is patentable and notice to this effect is earnestly solicited. Claims 19-24 and 26-32 respectively depend from the independent claim and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicant reserves the right to submit further arguments in support

of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicant has made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

By 

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